

THE SIERRA DE CUBITAS, CAMAGUEY, CUBA.

BY JOHN B. HENDERSON.

Modern railway extension in Cuba has opened many new fields of exploration in that delightful island which were denied to the past generation of collectors. This is especially the case in the central provinces of Santa Clara and Camaguey. In northern Camaguey there is an east and west range of hills known as the Sierra de Cubitas which raise their limestone crests about six or seven hundred feet above the level plains of the province. Like all limestone elevations in Cuba these present a forested region of great variety and richness which in this instance contrasts strongly with the almost treeless prairies that surround them.

The first mollusk record from the Cubitas was made by Carlos de la Torre who gathered there a few shells some ten years ago. Stillman Berry traversed one of the passes of the range about two years ago and took a few specimens en route. These he generously divided with me and at the first glance I then and there decided to take the very first opportunity to visit the region. All his shells were new. In December last, Mrs. A. C. Reed of Camaguey, an American who takes a great interest in Cuban land shells, spent a day collecting at the Loma de Borje, an outlying isolated hill of the Cubitas system, and her catch was remarkable in the number of new operculates and long slender *Microceramus* belonging to quite a new group. Save for two species (*Macroceramus hendersoni* Torre and *Microceramus longa* Hend.) none of the novelties obtained here have been published.

In February last the looked-for opportunity arrived, and Charles T. Simpson, Carlos de la Torre and I proceeded to Camaguey, where we outfitted for an assault upon the hills. Four days were spent in an almost frenzied siege upon the mollusks along a ten or twelve mile front, and I believe we have overlooked very little. We made little or no effort to collect the larger tree snails of wider distribution, but persisted in our search for the special things that are confined to this range. The two particular and striking elements are the development of a series of operculates that cannot very definitely be placed

in any genus unless in Dr. Dall's *Opisthosiphon*, although even there they fit only by virtue of having a siphon back of the aperture, but otherwise do not resemble nor have much in common with the *Ctenopomas* that form the bulk of Dall's genus; and secondly, the remarkable development of large *Macroceramus* of the *M. hendersoni* group and of long, slender *Urocoptis*-like *Microceramus*. Like the operculates these all appear to be new in species and groups.

The absence of all *Urocoptids* (save the one *U. camagueyana* Torre) is striking. None of the other shells that do seem referable to published species are typical except the *Pleurodonte* and *Liguus*, which are widely distributed over the island, and signify but little in questions of local distribution.

The strangeness of this mollusk group which appears to be removed from the Oriente and Trinidad groups gives rise to some perplexing queries in distribution. There seems to be a sort of vague line of connection with northern Santa Clara and diagonally south across the island and including the Isle of Pines. This is hinted at by a few species rather than proclaimed by the total. We have still much to learn about Cuban land shells.

What we had anticipated would be a very hard trip turned out to be one of our easiest ones. The open, level country made travel in a volanta-like trap possible and the few natives living in this sparsely settled country are hospitable to the point of embarrassment. We slept in our own hammocks and strangely enough our only discomfort was occasioned by the cold nights. We nearly froze to death.

SHELLS OF PUT-IN-BAY ISLAND, LAKE ERIE.

BY JOHN A. ALLEN.

Put-in-Bay is a beautiful island in Lake Erie, nearly all cultivated with orchard and vineyard, but retaining some rocky forest. It is of limestone formation, contains caves, and at places is faced with cliffs, and in the wilder parts is adorned with brilliant flowers, scarlet *Silene* and blue *Pentstemon*.

The island is about three miles from the Ohio shore, is about